

## Revision of the genus *Aipeiopsis* Péringuey (Coleoptera: Scarabaeidae: Melolonthinae)

by

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The genus *Aipeiopsis* Péringuey is revised. Four species are currently recognized in the genus: *A. hirsuta* Péringuey, *A. hirticollis* (Waterhouse), *A. echinataiceps* sp. nov., and *A. elachista* sp. nov.

### INTRODUCTION

The genus *Aipeiopsis* was described by Péringuey (1904) to include *A. hirsuta* Péringuey and *Cyclomera hirticollis* Waterhouse. Despite Péringuey's transfer of *C. hirticollis* to *Aipeiopsis*, Dalla Torre (1913) continued to list this species in the genus *Cyclomera* Klug.

This revision is part of a study of the Afrotropical Pachydemini *sensu* Dalla Torre (1913).

The following abbreviations are used to denote the location of study material:

- AVEC – A. V. Evans, University of Pretoria.
- BMNH – British Museum (Natural History), London.
- HFHC – H. F. Howden, Carleton University, Ottawa.
- NCI – National Collection of Insects, Pretoria.
- SAM – South African Museum, Cape Town.
- SMWN – State Museum, Windhoek.
- TM – Transvaal Museum, Pretoria.

### Genus *Aipeiopsis* Péringuey

***Aipeiopsis*** Péringuey, 1904: 160, Dalla Torre 1913: 313.

Type-species: *Aipeiopsis hirsuta* Péringuey, present designation.

Diagnosis: Head with reduced labrum; mentum twice as long as wide; prementum subequal in width to mentum; labial palps 2-segmented, proximal segments contiguous on ventral surface; antennae 10-segmented with 3-segmented club; head with clypeus nearly vertical, clypeal suture carinate; frons spinose anteriorly; ocular carinae absent; abdominal sternal sutures distinct, sternites slightly constricted medially; propygidium fused to fifth visible sternite; protibiae tridentate, spurs absent; inner protarsal and outer meso- and metatibial claws toothed, remaining claws simple; meso-

and metatibiae setigerously carinate; metafemora ovate; metatibiae greatly expanded apically, corbulae produced.

I have examined only one female of the genus, collected in ZIMBABWE, Atlantica, 16 mi. W. Salisbury, 1/6–11–1976, M. B. Fenton (HFHC). Without an associated male I am reluctant to assign this individual to a species, but the clypeal and maxillary palp characters differ from the known species. This specimen differs from the males examined in the following respects: body more globose overall; antennal club shorter than pedicel; elytra not covering the propygidium; metathoracic wings greatly reduced.

*Aipeiopsis* is known to occur in southern Angola, Botswana, northern Cape Province, along the Zambesi River in Zambia, and western Zimbabwe.

In southern Africa, *Aipeiopsis* Péringuey is most similar to *Cyclomera* Klug and *Periclitopa* Brenske, but may be readily distinguished by the 10-segmented antennae with a 3-segmented club, reduced labrum, narrow mentum, 2-segmented labial palpi, nearly vertical clypeus, toothed claws, and the absence of protibial spurs. *Aipeiopsis* may be distinguished from the central African *Phalangosoma* Quedenfeldt by 10-segmented antennae, contiguous basal segments of the labial palpi, toothed claws, the setigerously carinate meso- and metatibiae, and the fusion of the propygidium to the fifth visible abdominal sternite. From the central African *Scaphorina* Quedenfeldt, *Aipeiopsis* is distinguished by the carinate clypeal suture, toothed claws, and the single setigerous meso- and metatibial carina.

#### Key to the males of species of the genus *Aipeiopsis* Péringuey

- |   |  |                                    |
|---|--|------------------------------------|
| 1 | Clypeus rectangular (Figs 10, 11); first metatarsal segment longer than the longest apical metatibial spur .....     | 3                                  |
| — | Clypeus elliptical (Figs 8, 9); first metatarsal segment equal in length to the longest apical metatibial spur ..... | 2                                  |
| 2 | Species 11,0–13,0 mm long; inner protarsal claws as in Fig. 12; clypeus without carina (Fig. 8) .....                | <i>A. elachista</i> sp. nov.       |
| — | Species 18,0–19,0 mm long; inner protarsal claws as in Fig. 13; clypeus with carina (Fig. 9) .....                   | <i>A. hirsuta</i> Péringuey        |
| 3 | Distal segment of maxillary palp pyriform (Fig. 6); species 13,0–17,0 mm long .....                                  | <i>A. echinataiceps</i> sp. nov.   |
| — | Distal segment of maxillary palp elongate (Fig. 7); species 19,0–28,0 mm long .....                                  | <i>A. hirticollis</i> (Waterhouse) |

#### *Aipeiopsis elachista* sp. nov., Figs 4, 8, 12, 16

Description: 11,0–13,0 mm long. *Head* with clypeus elliptical, glabrous, impunctate, shining, without carina just below suture (Fig. 8); frons coarsely, setigerously punctate, vestiture intermixed with short spinose setae and long fine setae; labrum fused to clypeus, without suture; terminal segment of maxillary palp as in Fig. 4; antennal segment 7 not lamellate. *Pronotum* densely clothed in long, rufoflavous setae, more so beneath posterior margin and around scutellum. *Elytra* with surface clothed in short, recumbent, fine, flavous setae; striae not indicated. *Pygidium* triangular, length equal to basal width, surface alutaceous with scattered setigerous punctures, setae long, flavous, recumbent. *Legs* with inner protarsal claws toothed as in Fig. 12; first metatarsal segment longer than the longest apical metatibial spur. *Male genitalia* as in Fig. 16.

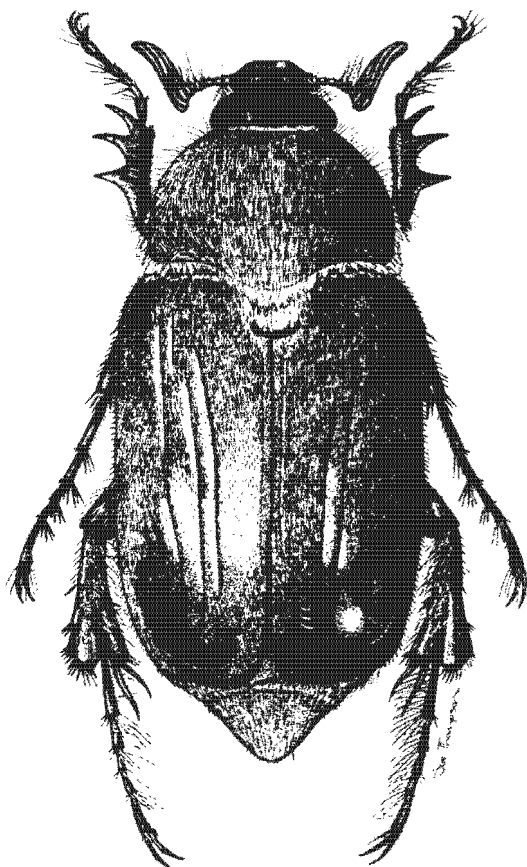


Fig. 1. *Aipeiopsis hirticollis* (Waterhouse), dorsal habitus. Actual length = 25.0 mm.

**MATERIAL EXAMINED.** Holotype male: ANGOLA, Cahama, 15 km NE, at 16.18S–14.28E, 4/6–XII–1974, H24482 (SMWN no. T1169); 4 paratype males, same data as holotype (AVEC, SMWN).

**Remarks:** *A. elachista* is the smallest species in the genus. In addition, *A. elachista* may be distinguished from *A. echinaticeps* and *A. hirticollis* by the elliptical clypeal margin. *A. elachista* is distinguished from *A. hirsuta* by the impunctate clypeus, lack of clypeal carina, and the strongly hooked inner protarsal claw with a very broad tooth.

*Aipeiopsis hirsuta* Péringuey, Figs 5, 9, 13, 17

***Aipeiopsis hirsuta*** Péringuey 1904: 160.

**Description:** 18.0–19.0 mm long. *Head* with clypeus elliptical, glabrous, shallowly punctate, shining, with arcuate carina just below clypeal suture (Fig. 9); frons

coarsely, setigerously punctate, vestiture intermixed with short spinose setae and long, fine setae; labrum fused to clypeus, without suture; terminal segment of maxillary palp as in Fig. 5; antennal segment 7 not lamellate. *Pronotum* densely clothed in long, rufoflavous setae, more so beneath posterior margin and around scutellum. *Elytra* with surface clothed in short, recumbent, fine, flavous setae; striae vaguely evident. *Pygidium* triangular, length equal to basal width, surface alutaceous with scattered setigerous punctures, setae long, flavous, recumbent. *Legs* with inner protarsal claws toothed as in Fig. 13; first metatarsal segment longer than the longest apical metatibial spur. *Male genitalia* as in Fig. 17.

MATERIAL EXAMINED. Holotype male: Zambesi, (Fry) (SAM).

Additional material examined: 10 (AVEC, SAM, TM), ZAMBIA: Livingstone. ZIMBABWE: Victoria Falls. SWA/NAMIBIA: Omega, SE 22/18Cd.

Months collected: January, February.

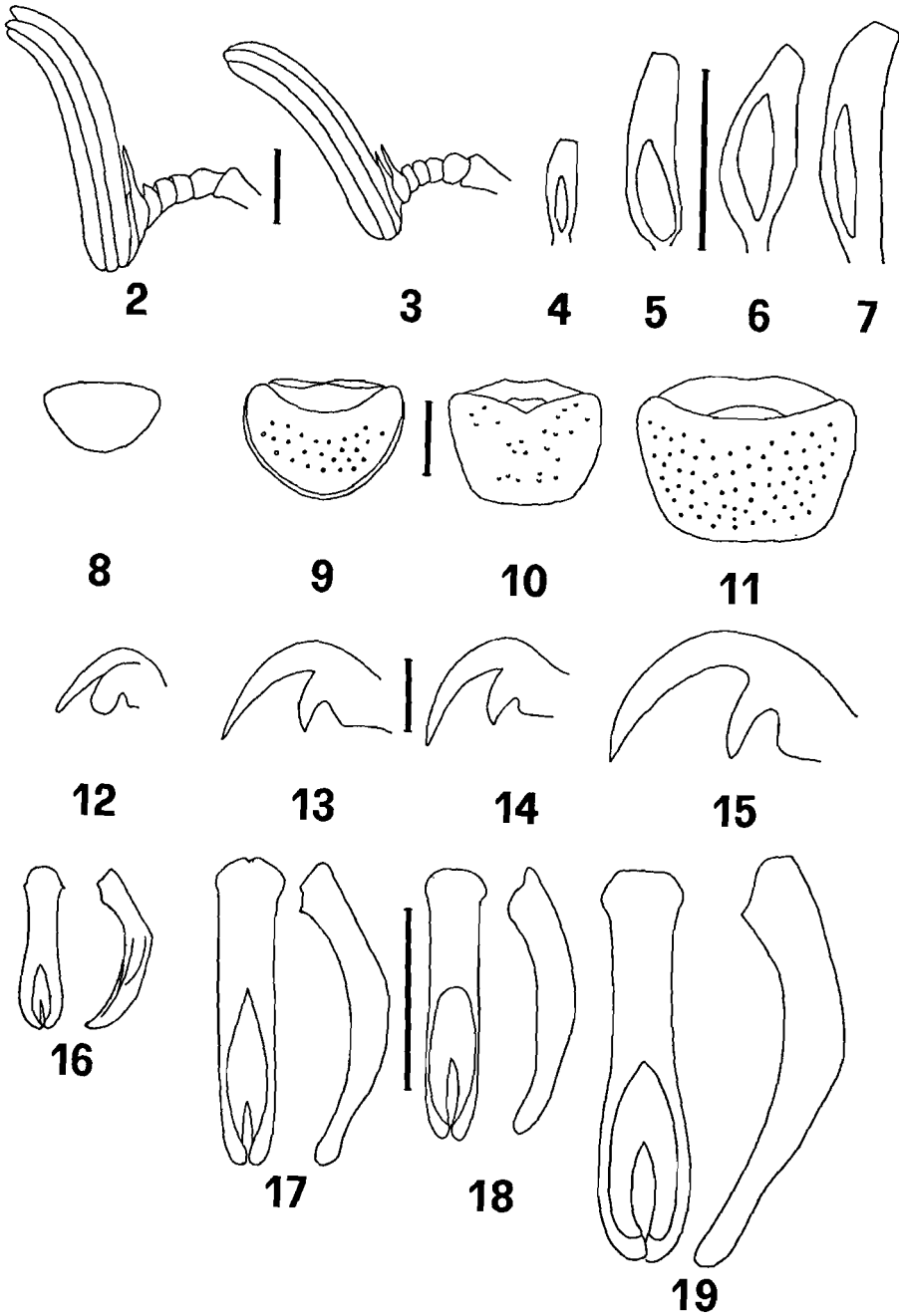
***Aipeiopsis echinaticeps* sp. nov., Figs 3, 6, 10, 14, 18**

Description: 13.0–17.0 mm long. *Head* with clypeus rectangular, glabrous, shallowly punctate, shining, with arcuate carina just below clypeal suture (Fig. 10); frons coarsely, setigerously punctate, vestiture intermixed with short spinose setae anteriorly and long fine setae posteriorly; labrum fused to clypeus, suture evident; terminal segment of maxillary palp as in Fig. 6; antennal segments 6 and 7 compressed, produced (Fig. 3), subequal to each other in length, or with 6 slightly shorter. *Pronotum* densely clothed in pale flavous setae, equally so beneath posterior margin and around scutellum. *Elytra* with surface clothed with recumbent, pale, flavous setae; striae indistinct. *Pygidium* triangular, length equal to basal width, surface alutaceous with scattered setigerous punctures, setae long, flavous, recumbent. *Legs* with inner protarsal claws toothed as in Fig. 14; first metatarsal segment subequal to the length of the longest apical metatibial spur. *Male genitalia* as in Fig. 18.

MATERIAL EXAMINED. Holotype male: SOUTH AFRICA, Twee Rivieren, 17/20-II-1957, Kalahari-Gemsbok Park Expedition (TM); 30 paratype males: SOUTH AFRICA: CAPE PROVINCE: same data as holotype (AVEC, TM); 1 paratype, Kalahari-Gemsbok Natnl. Park, Twee Rivieren. 12/20-II-1958, H. K. Munro (NCI); 1 paratype, Kalahari-Gemsbok, SWA, 18 Dec. 1970, B. H. Veenemans (NCI). BOTSWANA: 5 paratypes, Molopo Motel, 26.55S 20.47E, 14-IV-1986, E. Holm, E. Marais (AVEC, TM). SWA/NAMIBIA: 1 paratype, Duineveld, Elephant Riv., Kalah., 21/24-II-1957, Transv. Mus. Exped. (TM).

Remarks: *A. echinaticeps* is readily distinguished from its congeners by its smaller size, rectangular clypeal margin, pyriform distal segment of the maxillary palp, compressed and produced antennal segments 6 and 7, and by the male genitalia.

Figs 2–19. *Aipeiopsis* spp. 2–3. Antenna. 4–7. Distal segment of maxillary palp. 8–11. Clypeus, anterior aspect. 12–15. Inner male protarsal claw. 16–19. Male parameres, dorsal and lateral aspects. 4, 8, 12, 16. *A. elachista* sp. nov. 5, 9, 13, 17. *A. hirsuta* Péringuey. 3, 6, 10, 14, 18. *A. echinaticeps* sp. nov. 2, 7, 11, 15, 19. *A. hirticollis* (Waterhouse). Scale bars = 1 mm.



*Aipeiopsis hirticollis* (Waterhouse), Figs 1, 2, 7, 11, 15, 19

*Cyclomera hirticollis* Waterhouse, 1875: 406.

*Aipeiopsis hirticollis*, Péringuey 1904: 162.

Description: 19.0–28.0 mm long. *Head* with clypeus rectangular, glabrous (Fig. 11), shallowly punctate, shining, frons coarsely setigerously punctate, setae spinose anteriorly, finely pilose posteriorly; labrum fused to clypeus, suture evident; terminal segment of maxillary palp as in Fig. 7; antennal segments 6 and 7 compressed, lamellate, 6 always longer than 7 (Fig. 2). *Pronotum* densely clothed in flavous setae, more so beneath posterior margin and around scutellum. *Elytra* with entire surface clothed in recumbent pale flavous setae; striae distinct. *Pygidium* triangular, length greater than the basal width; surface alutaceous with scattered setigerous punctures, setae long, fulvous, recumbent. *Legs* with inner protarsal claws toothed as in Fig. 15; first metatarsal segment subequal to the length of the longest apical metatibial spur. *Male genitalia* as in Fig. 19.

MATERIAL EXAMINED: Holotype male: Lake Ngami (BMNH).

Additional material examined: 33 (AVEC, NCI, TM). BOTSWANA: Khutze Game Res.; 40 m. SW Ghanzi (Tsao); Makgadikgadi Pans Res. Khumaga, 20.26 S–24.35 E; 15 mi. SE Kai-Kai. ZAMBIA: Kalaba. SWA/NAMIBIA: 40 km ex Stampriet [on route to] Gochas, SE 2118Ba. SOUTH AFRICA: CAPE PROVINCE: Twee Rivieren; Mata Mata.

Months collected: September through May.

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